Surveyors Package

DHEC-OCRM

Edingsville Beach

October 11, 1999

Introduction

The 1990 Beachfront Management Act defines the method by which beachfront jurisdiction is established by the South Carolina Department of Health and Environmental Control, Office of Ocean and Coastal Resource Management (OCRM). The Beachfront Management Act requires that all shorelines be classified as inlet zones or standard zones. Inlet zones are further subdivided into stabilized inlet zones or unstabilized inlet zones.

In unstabilized inlet zones, the baseline is located at the most landward position of the shoreline in the past 40 years, unless the best available scientific and historical data of the inlet and adjacent beaches indicate that the shoreline is unlikely to return to its former position. In standard zones and stabilized inlet zones, the baseline is located at the crest of the primary oceanfront sand dune. If there is no primary dune, the baseline is established based on the volume of sand on the active beach profile at each survey monument.

The position of the setback line is determined by the local long-term erosion rate. In erosional areas, the setback line is located landward of the baseline a distance equal to 40 times the annual erosion rate. In stable or accretional areas, the setback line is located 20 feet landward of the baseline.

All original baselines and setback lines became final on July 3rd, 1991. The Beachfront Management Act calls for all lines to be revised between July 1998 and July 2000, and then once every eight to 10 years after each preceding revision. Once a line is adopted as final, it will not change unless OCRM moves it as the result of a successful legal appeal of the line position or following a successful beach renourishment project. The date on which the new lines for this particular area were adopted as final is listed on the front cover.

Section 48-39-330 of the Beachfront Management Act reads as follows:

> Thirty days after the initial adoption by the Department of setback lines, a contract of sale or transfer of real property located in whole or in part seaward of the setback line or the jurisdictional line must contain a disclosure statement that the property is or may be affected by the setback line, baseline, and the seaward corners of all habitable structures referenced to the South Carolina State Plane Coordinate System (N.A.D.-1983) and include the local erosion rate most recently made available by the Department for that particular standard zone or inlet zone as applicable. Language reasonably calculated to call attention to the existence of baselines, setback lines, jurisdictional lines, and the seaward corners of all habitable structures and the erosion rate complies with this section. The provisions of this section are regulatory in nature and do not affect the legality of an instrument violating the provisions.

As a result, surveyors have been called upon to transfer the OCRM baseline and setback lines to individual plats and to locate these lines in the field. OCRM has undertaken several steps to facilitate this task, as described below.

Orthophotographs

Orthophotographs, which are aerial photographs with the distortion removed at ground level, have been produced for all developed beaches in the state. These maps are to national map accuracy standards, and are depicted in the South Carolina State Plane Coordinate System (NAD 83). The maps are based on July 1993 photography, are at a scale of 1"=100', and have the beach lines drawn on them. Copies of these maps are for available for review in the appropriate OCRM office and municipal or county office. Copies are available for sale at Duncan-Parnell, Inc., 3150 W. Montague Ave., North Charleston, SC, 29419, phone 843-747-6033.

Digitized Lines

OCRM has digitized the location of the baseline and setback line for all islands where such lines have been established. These digital line coordinates are listed as northings and eastings in the South Carolina State Plane Coordinate System (NAD 83), in units of international feet. They are provided in order to avoid having different surveyors obtain slightly different results when digitizing or scaling off the orthophotographs. Appendix 1 gives the line coordinates for this area.

Beach Survey Monuments

In 1987, OCRM installed a network of beach survey monuments along most of South Carolina's shoreline. Over time, additional monuments have been added to the network to replace ones that have been destroyed. In general, the replacement monument is along the same shore-perpendicular line as the original monument but farther landward. Replacement monuments are stamped with the letter "B" (or the letter "C" for a third-generation monument). For example, monument 4220 was replaced with 4220B. These monuments are located horizontally in the South Carolina State Plane Coordinate System (NAD 83), and are vertically referenced to 1929 NGVD. Description sheets for all monuments in this are given in Appendix 2. In some cases, the monument's coordinates are given in meters. To convert to international feet, divide by 0.3048.

Local Erosion Rate

OCRM has conducted studies of the long-term erosion rates at all survey monument locations. These rates were used to establish the location of the setback line, and must also be given on individual plats. In erosional areas the exact rate was determined. In stable or accretional areas no specific number was determined, and the shoreline is officially classified as "stable to accretional" or S/A. Local erosion rates for the area covered by this report are given in Appendix 3.

Plat Review Requirements

In order to receive a permit from OCRM for many activities seaward of the setback line, the applicant must submit a plat in state plane coordinates with specific information shown on it. The following is a list of the required information:

1. Monuments used to reference the survey.
2. Line coordinates used to establish the baseline and setback line.
3. Coordinates of the property corners.
4. Coordinates of the corners of any habitable structures on the property.
5. Distance between the seaward structure corners and the baseline and setback line.
6. Footprint of all structures on the property.
7. Location of the crest and trough of the primary oceanfront sand dune.
8. Local erosion rate.

Appendix 1
Line Coordinates

This appendix contains a listing of OCRM baseline and setback line coordinates, given as northings and eastings in international feet referenced to the South Carolina State Plane Coordinate System (NAD 83). Coordinates are listed as one continuous line that begins at one end of the island or beach and extends to the other. There are separate listings for the baseline and the setback line.

DHEC-OCRM BASELINE COORDINATES
EDDINGSVILLE BEACH
VALID AS OF 10/11/99
STATE-PLANE COORDINATE SYSTEM, NAD 1983
INTERNATIONAL FEET

NORTHING	EASTING
249869.51	2222735.68
249820.84	2222764.88
249772.17	2222797.98
249719.61	2222825.23
249717.66	2222873.90
249723.50	2222934.25
249737.13	2222982.92
249768.28	2223039.37
249785.80	2223095.83
249813.05	2223156.18
249859.77	2223220.42
249904.55	2223284.66
249943.48	2223345.01
250001.89	2223401.47
250054.45	2223454.03
250108.96	2223520.22
250159.57	2223580.57
250196.56	2223642.87
250221.87	2223711.00
250251.07	2223744.10
250316.50	2223819.72
250381.93	2223895.35
250400.97	2223917.36

END

DHEC-OCRM SETBACK LINE COORDINATES
EDDINGSVILLE BEACH
VALID AS OF 10/11/99
STATE-PLANE COORDINATE SYSTEM, NAD 1983
INTERNATIONAL FEET

NORTHING	EASTING
249886.62	2222746.38
249971.59	2222799.11
250056.56	2222851.84
250141.53	2222904.57
250166.01	2222919.76
250228.25	2222998.03
250290.48	2223076.30
250352.72	2223154.58
250364.23	2223169.05
250420.70	2223251.58
250477.17	2223334.11
250533.65	2223416.64
250549.40	2223439.66
250614.39	2223515.66
250679.38	2223591.67
250696.57	2223611.77

END

Appendix 2
Long Term Erosion Rates

The long-term erosion rate for Edingsville Beach is 10.6 feet per year.